AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings thereof.

1. (Currently amended): A method of screening a compound or its salt that alters the binding property or signal transduction between (1) a G protein-coupled receptor protein comprising ~~the same or substantially the same amino acid sequence as~~ the amino acid sequence represented by SEQ ID NO: 1~~, SEQ ID NO: 10, SEQ ID NO: 12 or SEQ ID NO: 14~~ or a salt thereof and (2) humanin or a salt thereof, which comprises ~~using the receptor protein, a partial peptide thereof or a salt thereof and humanin or a salt thereof~~:

comparing the case (i) where the receptor protein or a salt thereof is brought into contact with humanin or a salt thereof and the case (ii) where the receptor protein or a salt thereof is contacted with humanin or a salt thereof and a test compound.

2. (Currently amended): The screening method according to claim 1, wherein the humanin is:

(1) a polypeptide comprising ~~the same or substantially the same amino acid sequence as~~ the amino acid sequence represented by SEQ ID NO: 3 or a salt thereof,

(2) a peptide consisting of consecutive 6 to 20 amino acids in ~~the same or substantially the same amino acid sequence as~~ the amino acid sequence represented by SEQ ID NO: 3 or a salt thereof, or

(3) a polypeptide comprising ~~the same or substantially the same amino acid sequence as~~ the amino acid sequence represented by SEQ ID NO: 7 or a salt thereof.

3. (Original): The screening method according to claim 1, wherein the humanin is:

(1) a polypeptide or its salt consisting of a) the amino acid sequence represented by SEQ ID NO: 3, b) an amino acid sequence represented by SEQ ID NO: 3 wherein 1 to 10 amino acids are deleted, c) an amino acid sequence represented by SEQ ID NO: 3 to which 1 to 10 amino acids are added, d) an amino acid sequence represented by SEQ ID NO: 3 wherein 1 to 5 amino acids are substituted by other amino acids, or e) an

amino acid sequence consisting of the above amino acid sequence with a combination of deletion, addition and substitution mentioned above,

(2) a polypeptide or its salt consisting of a) the amino acid sequence represented by SEQ ID NO: 4, b) an amino acid sequence represented by SEQ ID NO: 4 wherein 1 to 10 amino acids are deleted, c) an amino acid sequence represented by SEQ ID NO: 4 to which 1 to 10 amino acids are added, d) an amino acid sequence represented by SEQ ID NO: 4 wherein 1 to 5 amino acids are substituted by other amino acids, or e) an amino acid sequence consisting of the above amino acid sequence with a combination of deletion, addition and substitution mentioned above,

(3) a polypeptide or its salt consisting of a) the amino acid sequence represented by SEQ ID NO: 8, b) an amino acid sequence represented by SEQ ID NO: 8 wherein 1 to 10 amino acids are deleted, c) an amino acid sequence represented by SEQ ID NO: 8 to which 1 to 10 amino acids are added, d) an amino acid sequence represented by SEQ ID NO: 8 wherein 1 to 5 amino acids are substituted by other amino acids, or e) an amino acid sequence consisting of the above amino acid sequence with a combination of deletion, addition and substitution mentioned above,

(4) a peptide wherein the number of amino acids is 6 to 20, or its salt, consisting of a) an amino acid sequence in positions 19 to 24, positions 5 to 24, positions 1 to 20, positions 5 to 20 or positions 5 to 21 in the amino acid sequence represented by SEQ ID NO: 3, SEQ ID NO: 4 or SEQ ID NO: 8, b) an amino acid sequence comprising the above amino acid sequence wherein 1 to 6 amino acids are deleted, c) an amino acid sequence comprising the above amino acid sequence wherein 1 to 6 amino acids are added, d) an amino acid sequence comprising the above amino acid sequence wherein 1 to 6 amino acids are substituted by other amino acids, and e) an amino acid sequence comprising the above amino acid sequence with a combination of deletion, addition and substitution mentioned above, provided that the peptide does not include a peptide consisting of an amino acid sequence in positions 19 to 24, positions 5 to 24, positions 1 to 20, positions 5 to 20 or positions 5 to 21 in the amino acid sequence represented by SEQ ID NO: 5, or

(5) a polypeptide or its salt consisting of a) the amino acid sequence represented by SEQ ID NO: 7, b) an amino acid sequence represented by SEQ ID NO: 7 wherein 1

to 10 amino acids are deleted, c) an amino acid sequence represented by SEQ ID NO: 7 to which 1 to 10 amino acids are added, d) an amino acid sequence represented by SEQ ID NO: 7 wherein 1 to 10 amino acids are substituted by other amino acids, or e) an amino acid sequence consisting of the above amino acid sequence with a combination of deletion, addition and substitution mentioned above.

4. (Original): The screening method according to claim 1, wherein the humanin is:

(1) a polypeptide consisting of the amino acid sequence represented by SEQ ID NO: 3 or a salt thereof,

(2) a polypeptide consisting of the amino acid sequence represented by SEQ ID NO: 4 or a salt thereof,

(3) a polypeptide consisting of the amino acid sequence represented by SEQ ID NO: 6 or a salt thereof,

(4) a polypeptide consisting of the amino acid sequence represented by SEQ ID NO: 7 or a salt thereof,

(5) a polypeptide consisting of the amino acid sequence represented by SEQ ID NO: 8 or a salt thereof,

(6) a polypeptide consisting of the amino acid sequence represented by SEQ ID NO: 9 or a salt thereof, or

(7) a peptide or its salt consisting of a) an amino acid sequence in positions 19 to 24, positions 5 to 24, positions 1 to 20, positions 5 to 20 or positions 5 to 21 in the amino acid sequence represented by SEQ ID NO: 3, SEQ ID NO: 4 or SEQ ID NO: 8.

5. (Original): The screening method according to claim 1, wherein the amino group of an N-terminus methionine residue of humanin is formylated.

6. (Original): The screening method according to claim 1, wherein the humanin is a polypeptide, or its salt, consisting of the amino acid sequence represented by SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8 or SEQ ID NO: 9, wherein the amino group of an N-terminal methionine residue thereof is formylated.

7. (Currently amended): A kit for screening a compound or its salt that alters the binding property or signal transduction between (1) a G protein-coupled receptor protein comprising ~~the same or substantially the same amino acid sequence as~~ the amino acid sequence represented by SEQ ID NO: 1~~, SEQ ID NO: 10, SEQ ID NO: 12 or SEQ ID NO: 14~~ or a salt thereof and (2) humanin or a salt thereof, which comprises the receptor protein~~, a partial peptide thereof~~ or a salt thereof and humanin or a salt thereof.

Claims 8-33 (Cancelled)

34. (Currently amended): A method of screening an agonist or antagonist to a G protein-coupled receptor protein comprising ~~the same or substantially the same amino acid sequence as~~ the amino acid sequence represented by SEQ ID NO: 1~~, SEQ ID NO: 10, SEQ ID NO: 12 or SEQ ID NO: 14~~ or ~~to~~ a salt thereof, which comprises ~~using a compound or its salt that alters the binding property or signal transduction between (1) the G protein-coupled receptor protein, a partial peptide or a salt thereof and (2) humanin or a salt thereof~~:

measuring an inhibitory activity on intracellular cAMP formation upon bringing a test compound into contact with cells containing the receptor protein.

Claim 35-46 (Cancelled)

47. (New): The screening method according to Claim 1, which comprises measuring and comparing the amount of labeled humanin or a salt thereof bound to the receptor protein or a salt thereof between the case (i) where labeled humanin or a salt thereof is brought into contact with the receptor protein or a salt thereof and the case (ii) where labeled humanin or a salt thereof and a test sample are brought into contact with the receptor protein or a salt thereof.

48. (New): The screening method according to Claim 1, which comprises measuring and comparing the amount of labeled humanin or a salt thereof bound to

cells containing the receptor protein between the case (i) where labeled humanin or a salt thereof is brought into contact with the cells and the case (ii) where labeled humanin or a salt thereof and a test compound are brought into contact with the cells.

49. (New): The screening method according to Claim 1, which comprises measuring and comparing the amount of labeled humanin or a salt thereof bound to a cell membrane fraction containing the receptor protein between the case (i) where labeled humanin or a salt thereof is brought into contact with the cell membrane fraction and the case (ii) where labeled humanin or a salt thereof and a test compound are brought into contact with the cell membrane fraction.

50. (New): The screening method according to Claim 1, which comprises measuring and comparing the amount of labeled humanin or a salt thereof bound to the receptor protein between the case (i) where labeled humanin or a salt thereof is brought into contact with the receptor protein expressed on a cell membrane of a cultured transformant transformed with a recombinant vector comprising DNA comprising DNA encoding the receptor protein and the case (ii) labeled humanin or a salt thereof and a test compound are brought into contact with the receptor protein expressed on a cell membrane of the transformant.

51. (New): The screening method according to Claim 1, which comprises measuring and comparing a cell-stimulating activity mediated by the receptor protein between the case (1) where a compound or its salt that activates the receptor protein is brought into contact with cells containing the receptor protein and the case (2) where a compound or its salt that activates the receptor protein, and a test compound, are brought into contact with cells containing the receptor protein.

52. (New): The screening method according to Claim 1, which comprises measuring and comparing a cell-stimulating activity mediated by the receptor protein between the case where a compound or its salt that activates the receptor protein is brought into contact with the receptor protein expressed on a cell membrane of a

cultured transformant transformed with a recombinant vector comprising DNA comprising DNA encoding the receptor protein and the case where a compound or its salt that activates the receptor protein, and a test compound, are brought into contact with the receptor protein expressed on a cell membrane of the transformant.